CONESTOGA-ROVERS
& ASSOCIATES

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April 24, 2013

Reference No. 054046

Mr. Bradley Roberts
RCRA Corrective Action & Permits Branch
Air and Waste Management Division
U.S. Environmental Protection Agency Region 7
11201 Renner Blvd.
Lenexa, KS 66219

Dear Mr. Roberts:

Re: Monitoring Well Abandonment and Replacement – March 2013
Occidental Chemical Corporation Facility
Wichita, Kansas

The purpose of this letter is to document the recent abandonment of five existing monitoring wells from four nested locations and the installation of two replacement monitoring wells at the Occidental Chemical Corporation (OCC) Wichita Facility (Facility).

Scope of Work

The scope of work for the groundwater monitoring well abandonment and replacement activities was outlined in Appendix B (2011 Groundwater Monitoring Plan) of the approved Sampling and Analysis Plan Routine Groundwater Sampling Plan dated March 9, 2012 (SAP). This SAP focused on defining the long term scope of the semi-annual, annual, and biennial groundwater monitoring events and the field procedures to be used to collect the groundwater samples during these events. This SAP supersedes the 2009 SAP with respect to groundwater sampling frequency and procedures and further defined the groundwater sampling program under the Facility's Resource Conservation and Recovery Act (RCRA) Permit obligations (RCRA Permit #KSD007482029). Appendix B provided a summary table listing the sampling frequency for each well and identified several monitoring wells to be abandoned and/or replaced.

The scope and rational for the monitoring well abandonment program set out by Appendix B was as follows:

Location	*Task*	*Rational*
MW14S4	Abandon	Well was continuously dry
MW02S3	Abandon	Screen overlaps with MW02S2
MW16S2PVC	Abandon	Screen overlaps with MW16S2SS
MW16S4	Replace	Abandon/Replace damaged well
MW21S4	Replace	Abandon/Replace damaged well

The locations of these monitoring wells, relative to the entire monitoring well network, are shown on Figure 1.

Appendix B of the SAP also identified that monitoring well MW17S3B was damaged. MW17S3B had an inoperable pump that could not be removed and therefore was scheduled to be abandoned. However, the bladder pump in this well was successfully removed from the well (during the monitoring well repair program conducted in 2012) and replaced with a smaller diameter bladder pump, therefore eliminating the need to abandon and replace this monitoring well. Appendix B also identified that monitoring wells MW18S1, MW18S4, MW19S1, and MW27S1 were scheduled to be abandoned and replaced. However, work associated with replacing these four monitoring wells is pending an evaluation of the results of the ongoing Groundwater Investigation.

Field Activities

Monitoring well abandonment, replacement, and development activities were completed during the period from March 18 through March 26, 2013. GeoCore, Inc. of Salina, Kansas (GeoCore), under the supervision of a Conestoga-Rovers & Associates Inc. (CRA) geologist, conducted the monitoring well abandonment and replacement activities at the Facility. Monitoring wells were abandoned and replaced in accordance with applicable local and state requirements and performed under GeoCore Kansas License #527. Monitoring well plugging forms are provided in Appendix A.

Monitoring wells were abandoned by the removal of the concrete pads and protective bollards. The well screen and casing was plugged using bentonite chips that were then hydrated. The well casing was then over drilled to approximately 4 feet below grade using a drill rig equipped with hollow stem augers (HSAs). The casing was over drilled so that it could be cut off at a minimum of 3 feet below grade. The area of the previous well pad was backfilled with clean soil and graded to match the existing grade.

Following the abandonment of existing monitoring wells MW16S4 and MW21S4, replacement monitoring wells MW16S4R and MW21S4R were drilled and installed by GeoCore using HSAs. Since monitoring well MW21S4 is located within the right-of-way along South 63rd Street, an access permit was obtained from Sedgwick County Public Works. Permit number U1238-13 was obtained for the use of the public road right-of-way and kept on location for the duration of work activities.

The existing stratigraphic monitoring well log for MW16S4 and the cone penetrometer log for CPT-12 were reviewed in advance of drilling to aid in determining the final construction details for the replacement well, MW16S4R. In order to verify the depth of the C3 clay layer, continuous split spoon samples were collected from a depth beginning at 30 feet below ground

surface (bgs) until the end of the borehole. The collected samples were examined and logged by CRA's geologist until the bottom of the S4 sand unit (uppermost sand unit) was reached at 37.5 feet bgs. The base of the well screen was set at a depth of 40 feet bgs, and a total depth of 42.84 feet below top of casing (btoc) was measured following installation. The monitoring well was constructed using a 5 foot section of 0.010-inch slot perforated polyvinyl chloride (PVC) screen and schedule 40 PVC riser.

Replacement well MW21S4R was set at a depth of 37.5 feet bgs, although the bottom of the S4 sand was not clearly evident. The existing stratigraphic log for monitoring well MW21 and the log for CPT-37 were reviewed beforehand to aid in determining the final construction details for the replacement monitoring well. To that end, the log for MW21 did not clearly identify a C3 clay layer. In addition, the log for CPT-37 also did not identify a depth for the C3 clay layer but instead identified a silty sand layer present at an interval from 31 to 43 feet bgs. The log for CPT-37 identified the top of the S2/S3 sand at a depth of approximately 43 feet bgs. During the advancement of the borehole for MW21S4R, continuous split spoon samples were collected from a depth beginning at 25 feet bgs until the end of the borehole. The collected samples were examined and logged by CRA's geologist. Based on a thorough review of the previous borehole and CPT logs, the C3 clay beneath the S4 sand is not well defined in this area and mainly consists of a silty sand (as noted in the CPT-37 log and as observed in the collected samples). To avoid screening the replacement well in the S2/S3 sand, the borehole was terminated at a depth of 37.5 feet bgs, and the replacement wells was installed at this depth. The monitoring well was constructed using a 10 foot section of 0.010-inch slot perforated PVC screen and schedule 40 PVC riser. The total depth of the completed well was measured at 40.45 feet btoc, and no water was detected in the completed monitoring well.

Both replacement wells were completed using lockable 6-inch diameter above ground protective steel casings. Protective bollards were placed around MW16S4R. Both well casings and the bollards were painted yellow, and locks were placed on each well. Monitoring well stratigraphic/construction diagrams and the Bureau of Water water well record forms are included in Attachment B.

MW16S4R was developed using a disposable polypropylene bailer to remove water while using intermittent surging action to loosen fine grained material from the screen and filter pack. A submersible pump was then used to remove additional water from the formation. Water quality data were measured and recorded during development and included temperature, pH, and turbidity. Water generated from development activities was drummed and staged at a waste storage location on the east side of the Facility. Table 1 provides a summary of the measured well development parameters. Monitoring well MW21S4R was not developed as water has not been detected in the completed well.

Disposable bailers, pumps, and/or tubing removed from abandoned wells were placed in a dedicated hazardous waste dumpster staged east of the plant near the landfill area. Concrete and metal debris generated by the removal of the well pads and protective bollards were cleaned of any dirt and transported off site for general disposal.

The soil cuttings generated from drilling operations at the MW16S4R location were drummed and moved to a waste storage location east of the Plant pending off-site disposal. The cuttings from MW21S4R were evenly spread in the vicinity of the well location and used as backfill for the abandoned monitoring well pad.

As always, please don't hesitate to contact me or Juan Somoano if you have questions or need further information.

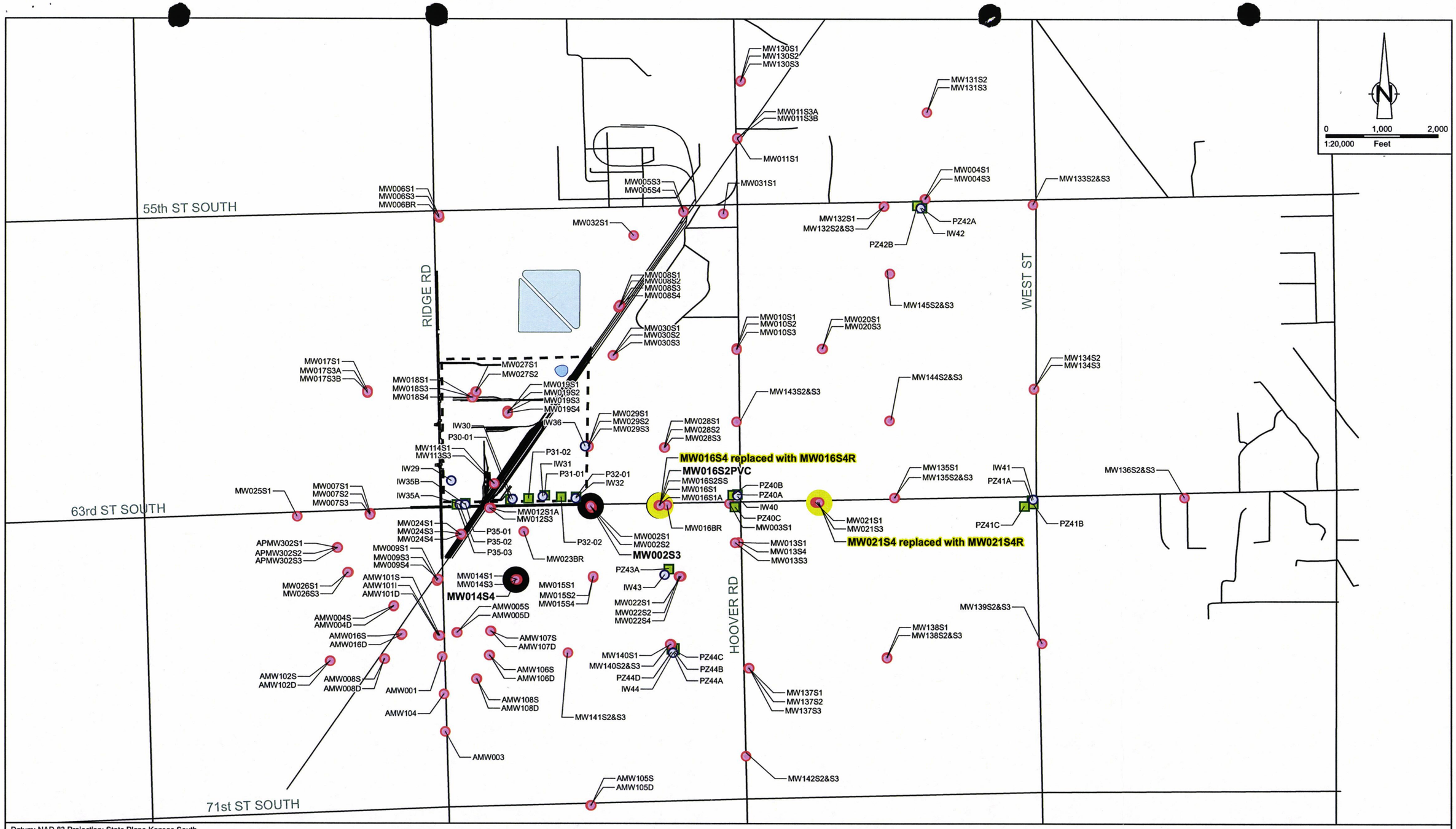
Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Bruce Clegg

BCC/ko/10
Encl.

cc: Mostafa Kamal - KDHE
Juan Somoano - GSHI
Lisa Blair - OCC
Mike Keppel - CRA
Walt Pochron - CRA



Datum: NAD 83 Projection: State Plane Kansas South

Legend

- Interceptor Well
- Monitoring Well
- Piezometer
- Abandoned
- Abandoned and Replaced
- Approximate Site Boundary
- Roads
- Railroad
- Stormwater Lagoon
- Storm Ponds

figure 1

MONITORING WELL, INTERCEPTOR WELL, AND PIEZOMETER LOCATIONS
OCCIDENTAL CHEMICAL CORPORATION
Wichita, Kansas

TABLE 1

MEASURED WELL DEVELOPMENT PARAMETERS
OCCIDENTAL CHEMICAL CORPORATION
WICHITA, KANSAS

Location	*Date*	*Time*	*Total Volume Purged (Gallons)*	*Static Water Level (ft BTOC)* [1]	*pH (Std. Units)* [2]	*Temp. (°C)* [3]	*Conductivity (µS/cm)* [4]	*Turbidity (NTU)* [5]	*Observations*
MW16S4R	3/22/2013	14:35	0	37.87	8.03	15.22	829	Opaque	Turbid, reddish brown, no odor
		14:54	5		7.16	15.38	773	Opaque	Turbid, reddish brown, no odor
		15:42	10		7.51	14.53	779	Opaque	Turbid, reddish brown, no odor
		15:56	15		7.05	15.54	768	Opaque	Turbid, reddish brown, no odor
		16:12	20		6.96	15.16	773	Opaque	Turbid, reddish brown, no odor
	3/26/2013	10:34	0	37.94	7.90	17.14	752	Opaque	Turbid, reddish brown, no odor
		10:37	25		7.34	16.60	766	Opaque	Turbid, reddish brown, no odor
		10:40	30		7.18	16.45	753	Opaque	Turbid, reddish brown, no odor
		10:44	35		7.16	16.24	764	998	Turbid, reddish brown, no odor
		10:49	40		7.25	16.17	761	274	Turbid, reddish brown, no odor
		10:53	45		7.19	16.31	763	181	Turbid, reddish brown, no odor
		11:09	50		7.90	15.43	739	184	Turbid, reddish brown, no odor
		11:13	55 [6]		7.59	15.66	764	60.4	Turbid, reddish brown, no odor

[1] ft BTOC - feet below top of casing
[2] Std Units - standard units
[3] °C - degrees Celsius
[4] µS/cm - microsiemens per centimeter
[5] NTU - nephelometric turbidity units
[6] Total volume purged 55 gallons

ATTACHMENT A

MONITORING WELL SEALING FORMS

WATER WELL PLUGGING RECORD Form WWC-5P KSA 82a-1212 ID NO.

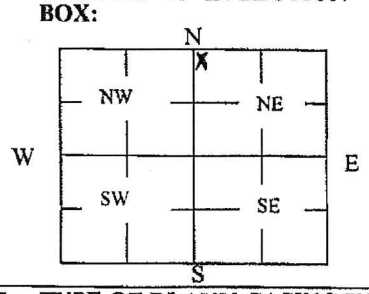
1 LOCATION OF WATER WELL: County: Sedgwick | Fraction: NW ¼ NW ¼ NW ¼ NE ¼ | Section Number: 34 | Township Number: T 28 S | Range Number: 1 ☐ E ☑ W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☑

Global Positioning Systems (GPS) information:
Latitude: _____ (in decimal degrees)
Longitude: _____ (in decimal degrees)
Elevation: _____
Datum: ☐ WGS84, ☐ NAD83, ☐ NAD27
Collection Method:
☐ GPS unit (Make/Model: _____)
☐ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ < 3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ > 15 m

2 WATER WELL OWNER: Occidental Chemical Corp.
RR#, St. Address, Box #: 6200 S. Ridge Road
City, State ZIP Code: Wichita, KS 67215

3 MARK WELL'S LOCATION WITH AN "X" IN SECTION BOX:



4 DEPTH OF WELL 50.65 ft.
WELL'S STATIC WATER LEVEL 50.65 ft
WELL WAS USED AS:

☐ Domestic	☐ Public Water Supply	☐ Dewatering
☐ Irrigation	☐ Oil Field Water Supply	☑ Monitoring
☐ Feedlot	☐ Domestic (Lawn & Garden)	☐ Injection Well
☐ Industrial	☐ Air Conditioning	☐ Other _____

Was a chemical/bacteriological sample submitted to Department? Yes ☐ No ☑

5 TYPE OF BLANK CASING USED:

☐ Steel ☑ PVC ☐ RMP (SR) ☐ ABS ☐ Wrought ☐ Asbestos-Cement ☐ Fiberglass ☐ Concrete Tile ☐ Other (Specify below) _____

Blank casing diameter 6 in. Was casing pulled? Yes ☑ No ☐ If yes, how much 3'
Casing height above or below land surface _____ in.

6 GROUT PLUG MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other _____

Grout Plug Intervals: From 3 ft. to 50.65 ft., From _____ ft. to _____ ft., From _____ to _____ ft.

What is the nearest source of possible contamination:

☐ Septic tank	☐ Seepage pit	☐ Fuel Storage	☐ Other (specify below)
☐ Sewer lines	☐ Pit privy	☐ Fertilizer storage	
☐ Watertight sewer lines	☐ Sewage lagoon	☐ Insecticide storage	
☐ Lateral lines	☐ Feedyard	☐ Abandoned water well	Direction from well? _____
☐ Cess pool	☐ Livestock pens	☐ Oil well/Gas well	How many feet? _____

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS
0	3	Native soil			
3	50.65	Bentonite (6")			
					MW0253

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was plugged under my jurisdiction and was completed on (mo/day/year) 3/18/2013 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 527. This Water Well Record was completed on (mo/day/year) 4/1/2013 under the business name of GeoCore Inc. by (signature) _____

INSTRUCTIONS: Use typewriter or ballpoint pen. Please press firmly and print clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 785/296-5524. Send one to Water Well Owner and retain one for your records. Visit us at http://www.kdheks.gov/waterwell/index.html.

Check one: ☐ White Copy ☐ Blue Copy ☐ Pink Copy

WATER WELL PLUGGING RECORD Form WWC-5P KSA 82a-1212 ID NO.

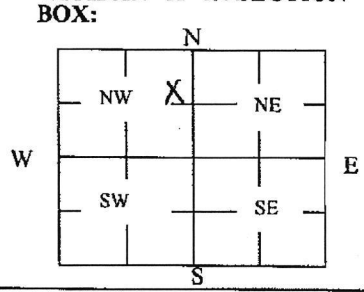
1 LOCATION OF WATER WELL: County: Sedgwick | Fraction: SE ¼ SE ¼ NW ¼ NW ¼ | Section Number: 34 | Township Number: T 28 S | Range Number: 1 ☐ E ☑ W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☑

Global Positioning Systems (GPS) information:
Latitude: _____ (in decimal degrees)
Longitude: _____ (in decimal degrees)
Elevation: _____
Datum: ☐ WGS84, ☐ NAD83, ☐ NAD27
Collection Method:
☐ GPS unit (Make/Model: _____)
☐ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ < 3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ > 15 m

2 WATER WELL OWNER: Occidental Chemical Corp.
RR#, St. Address, Box #: 6200 S. Ridge Road
City, State ZIP Code: Wichita, KS 67215

3 MARK WELL'S LOCATION WITH AN "X" IN SECTION BOX:



4 DEPTH OF WELL 35.5 ft.
WELL'S STATIC WATER LEVEL Dry ft
WELL WAS USED AS:

☐ Domestic	☐ Public Water Supply	☐ Dewatering
☐ Irrigation	☐ Oil Field Water Supply	☑ Monitoring
☐ Feedlot	☐ Domestic (Lawn & Garden)	☐ Injection Well
☐ Industrial	☐ Air Conditioning	☐ Other _____

Was a chemical/bacteriological sample submitted to Department? Yes ☐ No ☑

5 TYPE OF BLANK CASING USED:

☑ Steel ☐ PVC ☐ RMP (SR) ☐ ABS ☐ Wrought ☐ Asbestos-Cement ☐ Fiberglass ☐ Concrete Tile ☐ Other (Specify below) _____

Blank casing diameter 2 in. Was casing pulled? Yes ☑ No ☐ If yes, how much 3'
Casing height above or below land surface _____ in.

6 GROUT PLUG MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other _____

Grout Plug Intervals: From 3 ft. to 35.5 ft., From _____ ft. to _____ ft., From _____ to _____ ft.

What is the nearest source of possible contamination:

☐ Septic tank	☐ Seepage pit	☐ Fuel Storage	☐ Other (specify below)
☐ Sewer lines	☐ Pit privy	☐ Fertilizer storage	
☐ Watertight sewer lines	☐ Sewage lagoon	☐ Insecticide storage	
☐ Lateral lines	☐ Feedyard	☐ Abandoned water well	Direction from well?
☐ Cess pool	☐ Livestock pens	☐ Oil well/Gas well	How many feet?

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS
0	3	Native soil			
3	35.5	Bentonite (2")			
					MW14S4

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was plugged under my jurisdiction and was completed on (mo/day/year) 3/18/2013 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 527. This Water Well Record was completed on (mo/day/year) 4/1/2013 under the business name of GeoCore Inc. by (signature) Dale Lobl

INSTRUCTIONS: Use typewriter or ballpoint pen. Please press firmly and print clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 785/296-5524. Send one to Water Well Owner and retain one for your records. Visit us at http://www.kdheks.gov/waterwell/index.html.

Check one: ☐ White Copy ☐ Blue Copy ☐ Pink Copy

WATER WELL PLUGGING RECORD Form WWC-5P KSA 82a-1212 ID NO.

1 LOCATION OF WATER WELL: County: Sedgwick	Fraction: ¼ NE ¼ NW ¼ NE ¼	Section Number: 34	Township Number: T 28 S	Range Number: 1 ☐ E ☑ W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☑

Global Positioning Systems (GPS) information:
Latitude: _____ (in decimal degrees)
Longitude: _____ (in decimal degrees)
Elevation: _____
Datum: ☐ WGS84, ☐ NAD83, ☐ NAD27
Collection Method:
☐ GPS unit (Make/Model: _____)
☐ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ < 3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ > 15 m

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RR#, St. Address, Box #: 6200 S. Ridge Road
City, State ZIP Code: Wichita, KS 67215

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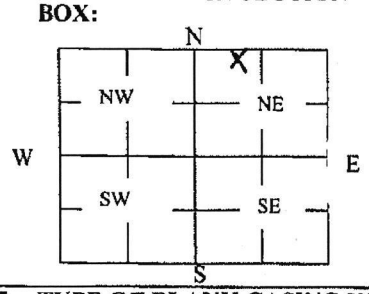

4 DEPTH OF WELL 27 ft.
WELL'S STATIC WATER LEVEL Dry ft
WELL WAS USED AS:

☐ Domestic ☐ Irrigation ☐ Feedlot ☐ Industrial
☐ Public Water Supply ☐ Oil Field Water Supply ☐ Domestic (Lawn & Garden) ☐ Air Conditioning
☑ Dewatering ☑ Monitoring ☐ Injection Well ☐ Other _____

Was a chemical/bacteriological sample submitted to Department? Yes ☐ No ☑

5 TYPE OF BLANK CASING USED:

☑ Steel ☐ PVC ☐ RMP (SR) ☐ ABS ☐ Wrought ☐ Asbestos-Cement ☐ Fiberglass ☐ Concrete Tile ☐ Other (Specify below) _____

Blank casing diameter 2 in. Was casing pulled? Yes ☑ No ☐ If yes, how much 3'
Casing height above or below land surface _____ in.

6 GROUT PLUG MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other _____

Grout Plug Intervals: From 3 ft. to 27 ft., From _____ ft. to _____ ft., From _____ to _____ ft.

What is the nearest source of possible contamination:

☐ Septic tank ☐ Sewer lines ☐ Watertight sewer lines ☐ Lateral lines ☐ Cess pool
☐ Seepage pit ☐ Pit privy ☐ Sewage lagoon ☐ Feedyard ☐ Livestock pens
☐ Fuel Storage ☐ Fertilizer storage ☐ Insecticide storage ☐ Abandoned water well ☐ Oil well/Gas well
☐ Other (specify below) _____
Direction from well? _____
How many feet? _____

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS
0	3	Native soil			
3	27	Bentonite (2")			
					MW16S4

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was plugged under my jurisdiction and was completed on (mo/day/year) 3/18/2013 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 527. This Water Well Record was completed on (mo/day/year) 4/1/2013 under the business name of GeoCore Inc. by (signature) _____

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Check one: ☐ White Copy ☐ Blue Copy ☐ Pink Copy

WATER WELL PLUGGING RECORD Form WWC-5P KSA 82a-1212 ID NO.

1 LOCATION OF WATER WELL: County: Sedgwick	Fraction: ¼ NE ¼ NW ¼ NE ¼	Section Number: 34	Township Number: T 28 S	Range Number: 1 ☐ E ☑ W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☑

Global Positioning Systems (GPS) information:
Latitude: _____ (in decimal degrees)
Longitude: _____ (in decimal degrees)
Elevation: _____
Datum: ☐ WGS84, ☐ NAD83, ☐ NAD27
Collection Method:
☐ GPS unit (Make/Model: _____)
☐ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ < 3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ > 15 m

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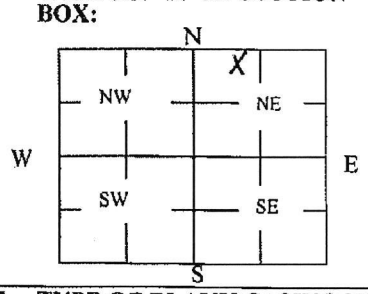

4 DEPTH OF WELL 80 ft.
WELL'S STATIC WATER LEVEL 29.53 ft
WELL WAS USED AS:

☐ Domestic	☐ Public Water Supply	☐ Dewatering
☐ Irrigation	☐ Oil Field Water Supply	☑ Monitoring
☐ Feedlot	☐ Domestic (Lawn & Garden)	☐ Injection Well
☐ Industrial	☐ Air Conditioning	☐ Other _____

Was a chemical/bacteriological sample submitted to Department? Yes ☐ No ☑

5 TYPE OF BLANK CASING USED:

☐ Steel	☐ RMP (SR)	☐ Wrought	☐ Fiberglass	☐ Other (Specify below)
☑ PVC	☐ ABS	☐ Asbestos-Cement	☐ Concrete Tile	

Blank casing diameter 2 in. Was casing pulled? Yes ☑ No ☐ If yes, how much 3'
Casing height above or below land surface _____ in.

6 GROUT PLUG MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other _____

Grout Plug Intervals: From 3 ft. to 80 ft., From _____ ft. to _____ ft., From _____ to _____ ft.

What is the nearest source of possible contamination:

☐ Septic tank	☐ Seepage pit	☐ Fuel Storage	☐ Other (specify below)
☐ Sewer lines	☐ Pit privy	☐ Fertilizer storage	
☐ Watertight sewer lines	☐ Sewage lagoon	☐ Insecticide storage	
☐ Lateral lines	☐ Feedyard	☐ Abandoned water well	Direction from well? _____
☐ Cess pool	☐ Livestock pens	☐ Oil well/Gas well	How many feet? _____

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS
0	3	Native soil			
3	80	Bentonite (2")			
					MW16S2

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was plugged under my jurisdiction and was completed on (mo/day/year) 3/18/2013 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 527. This Water Well Record was completed on (mo/day/year) 4/1/2013 under the business name of GeoCore Inc. by (signature) _____

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Check one: ☐ White Copy ☐ Blue Copy ☐ Pink Copy

WATER WELL PLUGGING RECORD Form WWC-5P KSA 82a-1212 ID NO.

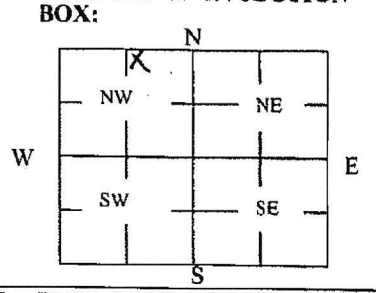
1 LOCATION OF WATER WELL: County: Sedgwick | Fraction: ¼ NW ¼ NE ¼ NW ¼ | Section Number: 35 | Township Number: T 28 S | Range Number: 1 ☐ E ☑ W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☑

Global Positioning Systems (GPS) information:
Latitude: _____ (in decimal degrees)
Longitude: _____ (in decimal degrees)
Elevation: _____
Datum: ☐ WGS84, ☐ NAD83, ☐ NAD27
Collection Method:
☐ GPS unit (Make/Model: _____)
☐ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ < 3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ > 15 m

2 WATER WELL OWNER: Occidental Chemical Corp.
RR#, St. Address, Box #: 6200 S. Ridge Road
City, State ZIP Code: Wichita, KS 67215

3 MARK WELL'S LOCATION WITH AN "X" IN SECTION BOX:



4 DEPTH OF WELL 35 ft.
WELL'S STATIC WATER LEVEL Dry ft
WELL WAS USED AS:

☐ Domestic ☐ Irrigation ☐ Feedlot ☐ Industrial
☐ Public Water Supply ☐ Oil Field Water Supply ☐ Domestic (Lawn & Garden) ☐ Air Conditioning
☑ Dewatering ☑ Monitoring ☐ Injection Well ☐ Other _____

Was a chemical/bacteriological sample submitted to Department? Yes ☐ No ☑

5 TYPE OF BLANK CASING USED:

☑ Steel ☐ PVC ☐ RMP (SR) ☐ ABS ☐ Wrought ☐ Asbestos-Cement ☐ Fiberglass ☐ Concrete Tile ☐ Other (Specify below) _____

Blank casing diameter 2 in. Was casing pulled? Yes ☑ No ☐ If yes, how much 3'
Casing height above or below land surface _____ in.

6 GROUT PLUG MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other _____

Grout Plug Intervals: From 3 ft. to 35 ft., From _____ ft. to _____ ft., From _____ to _____ ft.

What is the nearest source of possible contamination:
☐ Septic tank ☐ Sewer lines ☐ Watertight sewer lines ☐ Lateral lines ☐ Cess pool
☐ Seepage pit ☐ Pit privy ☐ Sewage lagoon ☐ Feedyard ☐ Livestock pens
☐ Fuel Storage ☐ Fertilizer storage ☐ Insecticide storage ☐ Abandoned water well ☐ Oil well/Gas well
☐ Other (specify below) _____
Direction from well? _____
How many feet? _____

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS
0	3	Native soil			
3	35	Bentonite (2")			
					MW21S4

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was plugged under my jurisdiction and was completed on (mo/day/year) 3/19/2013 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 527. This Water Well Record was completed on (mo/day/year) 4/1/2013 under the business name of GeoCore Inc. by (signature) _____

INSTRUCTIONS: Use typewriter or ballpoint pen. Please press firmly and print clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 785/296-5524. Send one to Water Well Owner and retain one for your records. Visit us at http://www.kdheks.gov/waterwell/index.html.

Check one: ☐ White Copy ☐ Blue Copy ☐ Pink Copy

ATTACHMENT B

MONITORING WELL STRATIGRAPHIC AND CONSTRUCTION DIAGRAMS AND WATER WELL RECORD FORMS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OCC Wichita
PROJECT NUMBER: 054046
CLIENT: GSH
LOCATION: Wichita, Kansas
DRILLING CONTRACTOR: GeoCore, Inc.

HOLE DESIGNATION: MW16S4R
DATE COMPLETED: March 19, 2013
DRILLING METHOD: 4¼" ID HSA
FIELD PERSONNEL: J. Raye
DRILLER: C. Robl

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	Not sampled		Concrete				
30	SW SAND, with silt and clay, loose, fine to medium grained sand, reddish brown, moist, no odor - gravel included, coarser at 32.5ft BGS - with more gravel at 35.0ft BGS	30.00	Bentonite Chips 8" Ø Borehole Sand Pack	1SS 2SS 3SS		2.0 2.5 2.0	
35	CL CLAY, with silt, medium plasticity, brown, wet	37.50	2" Ø Well Screen	4SS		0.3	
40	END OF BOREHOLE @ 40.0ft BGS	40.00					

WELL DETAILS
Screened interval:
35.00 to 40.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Seal:
3.00 to 33.00ft BGS
Material: Bentonite Chips
Sand Pack:
33.00 to 40.00ft BGS
Material: 20-12 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 3/19/13

OVERBURDEN LOG 54046 CHI.GPJ CRA_CORP.GDT 4/15/13

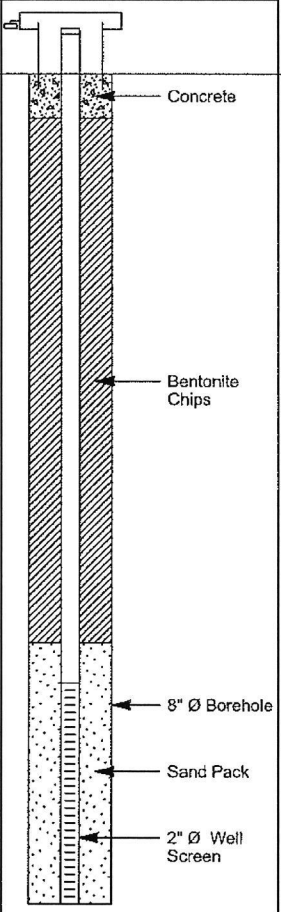
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OCC Wichita
PROJECT NUMBER: 054046
CLIENT: GSH
LOCATION: Wichita, Kansas
DRILLING CONTRACTOR: GeoCore, Inc.

HOLE DESIGNATION: MW21S4R
DATE COMPLETED: March 20, 2013
DRILLING METHOD: 4¼" ID HSA
FIELD PERSONNEL: J. Raye
DRILLER: C. Robl

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Not sampled	
25	SW SAND, gravelly, loose, fine to coarse grained sand	25.00
	CL CLAY, with silt, stiff, brown, dry	27.00 27.50
30	SW SAND, with silt, trace clay and gravel, loose, reddish brown, dry - moist at 32.5ft BGS	
35	- more silt and clay, less gravel at 35.0ft BGS	
	END OF BOREHOLE @ 37.5ft BGS	37.50

MONITOR WELL



WELL DETAILS
Screened interval:
27.50 to 37.50ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Seal:
3.00 to 25.50ft BGS
Material: Bentonite Chips
Sand Pack:
25.50 to 37.50ft BGS
Material: 20-12 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE
1SS		2.0	
2SS		2.0	
3SS		2.5	
4SS		2.0	
5SS		2.0	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 54046 CHI.GPJ CRA_CORP.GDT 4/15/13

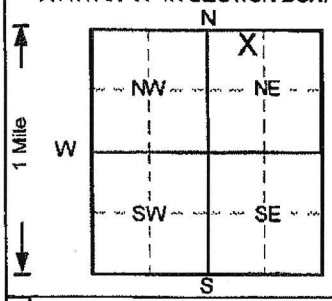
WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
County: Sedgwick	NE ¼ NW ¼ NE ¼	34	T 28 S	R 1 (E) W

Distance and direction from nearest town or city street address of well if located within city?
6200 S. Ridge Rd., Wichita

2 WATER WELL OWNER: Occidental Chemical Corp.
RR#, St. Address, Box # : 6200 S. Ridge Road
City, State, ZIP Code : Wichita, KS 67215
Board of Agriculture, Division of Water Resources Application Number:

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL 40 ft. ELEVATION:
Depth(s) Groundwater Encountered 1. ft. 2. ft. 3. ft.
WELL'S STATIC WATER LEVEL ft. below land surface measured on mo/day/yr
Pump test data: Well water was NA ft. after hours pumping gpm
Est. Yield NA gpm: Well water was ft. after hours pumping gpm
Bore Hole Diameter 8 in. to 40 ft., and in. to ft.
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Lawn and garden only (10) Monitoring well
Was a chemical/bacteriological sample submitted to Department? Yes ..... No ✓ ; If yes, mo/day/yr sample was submitted
Water Well Disinfected? Yes No ✓

5 TYPE OF BLANK CASING USED: 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued Clamped
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded
(2) PVC 4 ABS 7 Fiberglass Threaded ✓
Blank casing diameter 2 in. to 35 ft., Dia in. to ft., Dia in. to ft.
Casing height above land surface 30 in., weight lbs./ft. Wall thickness or gauge No. Sch. 40

TYPE OF SCREEN OR PERFORATION MATERIAL
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 10 Asbestos-cement
2 Brass 4 Galvanized steel 6 Concrete tile 8 RMP (SR) 11 Other (specify)
9 ABS 12 None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Gauzed wrapped 8 Saw cut 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 9 Drilled holes
7 Torch cut 10 Other (specify)

SCREEN-PERFORATED INTERVALS: From 35 ft. to 40 ft., From ft. to ft.
From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 33 ft. to 40 ft., From ft. to ft.
From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bentonite (4) Other Concrete
Grout Intervals: From 0 ft. to 3 ft., From 3 ft. to 33 ft., From ft. to ft.
What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/Gas well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 16 Other (specify below)
13 Insecticide storage
Direction from well? How many feet?

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	13	Clay, sandy, silty, Dark Brown to Gray			
13	37.5	Sand, w/silt and gravels, Reddish Brown			
37.5	40	Clay, stiff, Brown			
					MW16S4R, Abovegrade

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) 3/19/2013 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 527 This Water Well Record was completed on (mo/day/yr) 4/5/2013 under the business name of GeoCore, Inc. by (signature) Dan Bell

INSTRUCTIONS: Use typewriter or ball point pen. *PLEASE PRESS FIRMLY* and *PRINT* clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.

OFFICE USE ONLY T R EW SEC. ¼ ¼ ¼

WATER WELL RECORD Form WWC-5 KSA 82a-1212

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
County: Sedgwick	NW ¼ NE ¼ NW ¼	35	T 28 S	R 1 E/W

Distance and direction from nearest town or city street address of well if located within city?
6200 S. Ridge Rd., Wichita

2 WATER WELL OWNER: Occidental Chemical Corp.
RR#, St. Address, Box # : 6200 S. Ridge Road
City, State, ZIP Code : Wichita, KS 67215
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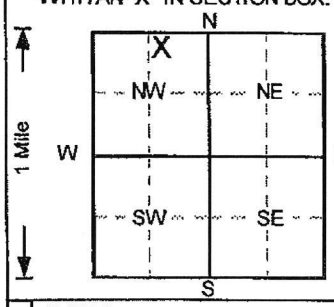

4 DEPTH OF COMPLETED WELL 37.5 ft. ELEVATION:
Depth(s) Groundwater Encountered 1. ft. 2. ft. 3. ft.
WELL'S STATIC WATER LEVEL ft. below land surface measured on mo/day/yr
Pump test data: Well water was NA ft. after hours pumping gpm
Est. Yield NA gpm: Well water was ft. after hours pumping gpm
Bore Hole Diameter 8 in. to 37.5 ft., and in. to ft.
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Lawn and garden only (10) Monitoring well
Was a chemical/bacteriological sample submitted to Department? Yes No ✓; If yes, mo/day/yr sample was submitted
Water Well Disinfected? Yes No ✓

5 TYPE OF BLANK CASING USED: 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued Clamped
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(2) PVC 4 ABS 7 Fiberglass Threaded ✓
Blank casing diameter 2 in. to 27.5 ft., Dia in. to ft., Dia in. to ft.
Casing height above land surface 30 in., weight lbs./ft. Wall thickness or gauge No. Sch. 40

TYPE OF SCREEN OR PERFORATION MATERIAL
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 10 Asbestos-cement
2 Brass 4 Galvanized steel 6 Concrete tile 8 RMP (SR) 11 Other (specify)
9 ABS 12 None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Gauzed wrapped 8 Saw cut 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 9 Drilled holes
7 Torch cut 10 Other (specify)

SCREEN-PERFORATED INTERVALS: From 27.5 ft. to 37.5 ft., From ft. to ft.
From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 25 ft. to 37.5 ft., From ft. to ft.
From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bentonite (4) Other Concrete
Grout Intervals: From 0 ft. to 3 ft., From 3 ft. to 25 ft., From ft. to ft.

What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/Gas well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 16 Other (specify below)
13 Insecticide storage
Direction from well? How many feet?

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	15	Clay, sandy, silty, Dark Brown to Gray			
15	37.5	Sand, w/silt and gravel, Reddish Brown			
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7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) 3/20/2013 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 527 This Water Well Record was completed on (mo/day/yr) 4/5/2013 under the business name of GeoCore, Inc. by (signature) Dale Kohl

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.

OFFICE USE ONLY T R E/W SEC. ¼ ¼ ¼